

### 6.3 Pre-Test Review

Name: \_\_\_\_\_

#### Please show all of your work.

A) Add or subtract the polynomials. Write your answers with exponents in descending order.

1)  $(8x^2 - 4x) + (4x + 2)$

2)  $(-2x^3 + x - 21) - (5x^3 + 2x^2 - 9x)$

3)  $(5x - 3) - (6x^3 - 3x^2 + 2x - 4)$

4)  $(19 - 31x + 2x^2) + (1 - 32x)$

B) Showing all work, use the distributive property. Then simplify by combining like terms. Write answers with exponents in descending order.

5)  $7(2x^2 - 5x - 2) + 2(-4x^2 + 3x - 8)$

6)  $3x(4x^5 + 2x^3) + 2x(3x^5 - 5x^3 + 7x)$

7)  $3(5x^2 - 2xy + 6y^2) - 2(x^2 - 4xy + 9y^2)$

8)  $x(3x^2 + 2x + 1) - (7x^3 + 3x^2 + 2)$

C) Showing all work, use the distributive property, and simplify the expression by combining like terms. Write answers with exponents in descending order.

9)  $(4x - 2)(1.5x + 6)$

10)  $(3x - 2y)(6x - 7y)$

11)  $(xy + 3)(2xy + 3)$

12)  $(3x + 2)(x^2 - 4x + 3)$

$$13) (3x-2)(7x^3-5x^2-5x-2)$$

$$14) (4x^2+3x+1)(2x^2-9x+8)$$

D) *Showing all work, use special products shortcuts to solve the problems.*

$$15) (9x+2)(9x-2)$$

$$16) (3x+3)(3x-3)$$

$$17) (5x-2)(5x+2)$$

$$18) (3x+7)^2$$

$$19) (5x+2)^2$$

$$20) (6x+3)^2$$

E) *Show all your work.*

$$21) 10x^2(x-5)$$

$$22) (x+2)(x-2)$$

$$23) (3x-5)^2$$

$$24) (3x^3+10x+5) - (x^3-4x+6)$$

$$25) (x+11)(x^2-5x+9)$$

$$26) (4x-5)(4x+5)$$